

Practitioner's Docket No. END920030054US1**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Vyacheslav Barsuk

Application No.: 10 / 736,429

Group No.: 2116

Filed: 12/15/2003

Examiner: Michael J. Brown

For: METHOD, APPARATUS AND PROGRAM STORAGE DEVICE FOR PROVIDING REMOTE
POWER RESET AT A REMOTE SERVER THROUGH A NETWORK CONNECTION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**DECLARATION OF PRIOR INVENTION IN THE UNITED STATES
OR IN A NAFTA OR WTO MEMBER COUNTRY
TO OVERCOME CITED PATENT OR PUBLICATION (37 C.F.R. § 1.131)**

NOTE: 37 C.F.R. § 1.131 Affidavit or declaration of prior invention.

(a) When any claim of an application or a patent under reexamination is rejected, the inventor of the subject matter of the rejected claim, the owner of the patent under reexamination, or the party qualified under §§ 1.42, 1.43, or 1.47, may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference or activity on which the rejection is based. The effective date of a U.S. patent, U.S. patent application publication, or international application publication under PCT Article 21(2) is the earlier of its publication date or date that it is effective as a reference under 35 U.S.C. 102(e). Prior invention may not be established under this section in any country other than the United States, a NAFTA country, or a WTO member country. Prior invention may not be established under this section before December 8, 1993, in a NAFTA country other than the United States, or before January 1, 1996, in a WTO member country other than a NAFTA country. Prior invention may not be established under this section if either:

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*

(When using Express Mail, the Express Mail label number is mandatory;
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

- ☐ deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

37 C.F.R. § 1.8(a)

37 C.F.R. § 1.10 *

- ☒ with sufficient postage as first class mail.

- ☐ as "Express Mail Post Office to Addressee"

Mailing Label No. _____ (mandatory)

TRANSMISSION

- ☐ facsimile transmitted to the Patent and Trademark Office, (571) 273-8300.

Date: 6/21/06

Signature

Georgia Y. Brundage

(type or print name of person certifying)

* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome
Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 1 of 5)

(1) The rejection is based upon a U.S. patent or U.S. patent application publication of a pending or patented application to another or others which claims the same patentable invention as defined in § 1.601(h); or

(2) The rejection is based upon a statutory bar.

PURPOSE OF DECLARATION

1. This declaration is to establish completion of the invention of this application in

- ☒ the United States
☐ the NAFTA country _____ (name of country)
☐ the WIPO country _____ (name of country)

at a date prior to June 30, 2003, that is the effective date of the prior art

- ☐ publication _____
☐ patent _____
☒ patent publication US 2004/0267918 A1
☐ other _____

that was cited by the

- ☒ examiner.
☐ applicant.

NOTE: 37 C.F.R. § 1.131 is not applicable to a rejection based on a U.S. patent that CLAIMS the rejected invention.

2. The person making this declaration is (are):

- ☒ the inventor(s).
☐ only some of the joint inventor(s) (and a suitable excuse is attached for failure of the omitted joint inventor(s) to sign)
☐ the party in interest (and a suitable explanation as why it is not possible to produce the declaration of the inventor(s) is attached)

FACTS AND DOCUMENTARY EVIDENCE

NOTE: "The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice or to the filing of the application. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence satisfactorily explained." 37 C.F.R. § 1.131(b).

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 2 of 5)

I conceived and reduced to practice the invention as claimed by March 2003. This is evidenced by disclosure END8-2003-0065 submitted by me on May 7, 2003.

3. To establish the date of completion of the invention of this application, the following attached documents and/or models are submitted as evidence:

(check all applicable items below)

- ☐ sketches
- ☐ blueprints
- ☐ photographs
- ☐ reproduction(s) of notebook entries
- ☐ model
- ☐ supporting statement(s) by witness(es) (where verbal disclosures are the evidence relied upon)
- ☐ interference testimony resc1.c (source code)
dir_list.txt (directory)
- ☒ disclosure documents- Disclosure END8-2003-0065
resc.c (source code)

NOTE: While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder* 1897 C.D. 724, 81 O.G. 1417." See also M.P.E.P. § 715.07 and § 2138.04, 7th ed.

4. From these documents and/or models, it can be seen that the invention in this application was made

- ☐ on _____
- ☒ at least by the date of March 31, 2003, which is a date earlier than the effective date of the reference.

NOTE: "If the dates of the exhibits have been removed or blocked off, the matter of dates can be taken care of in the body of the oath or declaration." M.P.E.P. § 715.07, 8th ed.

NOTE: "[T]he dates in the oath or declaration may be the actual dates, or, if the applicant or patent owner does not desire to disclose his or her actual dates, he or she may merely allege that the acts referred to occurred prior to a specified date. However, the actual dates of acts relied on to establish diligence must be provided." M.P.E.P. § 715.07, 8th ed.

DILIGENCE

NOTE: "Where there has not been reduction to practice prior to the date of the reference, the applicant or patent owner must also show diligence in the completion of his or her invention from a time just prior to the date of the reference continuously up to the date of the actual reduction to practice or up to the date of filing his or her application (filing constitutes a constructive reduction to practice, § 1.131)." M.P.E.P. § 715.07, 8th ed..

NOTE: "A conception of an invention, though evidenced by disclosure, drawings, and even a model, is not a complete invention under the patent laws, and confers no rights on an inventor, and has no effect on a subsequently granted patent to another, UNLESS HE OR SHE FOLLOWS IT WITH REASONABLE DILIGENCE BY SOME OTHER ACT, such as an actual reduction to practice or filing an application for a patent. *Automatic Weighing Mach. Co. v. Pneumatic Scale Corp., Limited* 1909 C.D. 498, 139 O.G. 991, M.P.E.P. § 715.07, 8th ed.

"Conception in the mental part of the inventive act, but it must be capable of proof, as by drawings, complete disclosure to another person, etc. In *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417, it was established that conception is more than a mere vague idea of how to solve a problem; the means themselves and their interaction must be comprehended also." M.P.E.P. § 715.07, 8th ed.

NOTE: "[O]nly diligence before reduction to practice is a material consideration. The 'lapse of time between the completion or reduction to practice of an invention and the filing of an application thereon' is not relevant to an affidavit or declaration under 37 CFR 1.131. See *Ex parte Merz*, 75 USPQ 296 (Bd. App. 1947)." MPEP § 715.07(a), 8th ed.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 3 of 5)

5. Attached is a statement establishing the diligence of the applicants, from the time of their conception, to a time just prior to the date of the reference, up to the:

- ☒ actual reduction to practice.
- ☐ filing of this application.

TIME OF PRESENTATION OF THE DECLARATION

(complete (a), (b) or (c))

- (a) ☒ This declaration is submitted prior to final rejection.
- (b) ☐ This declaration is submitted with the first response after final rejection, and is for the purpose of overcoming a new ground of rejection or requirement made in the final rejection.
- (c) ☐ This declaration is submitted after final rejection. A showing under 37 C.F.R. § 1.116(b) is submitted herewith.

DECLARATION

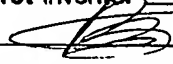
6. As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 4 of 5)

SIGNATURE(S)

7. (complete A or B below)

A. Inventor(s)Full name of sole or first inventor Vyacheslav BarsukInventor's signature Date 6/15/06 Country of Citizenship UkraineResidence 2450 Airport Road, K3103, Longmont, CO 80503Post Office Address Same as Residence

Full name of second joint inventor, if any _____

Inventor's signature _____

Date _____ Country of Citizenship _____

Residence _____

Post Office Address _____

(use added page for signature by additional inventors)

Number of pages added: 0**B. Assignee**_____
(type or print name of person signing)_____
Signature_____
Date_____
P.O. Address_____
(type name of assignee)_____
Address of assignee_____
Title of person authorized to sign
on behalf of assignee

Assignment recorded in PTO on _____

Reel _____ Frame _____

A "CERTIFICATE UNDER 37 C.F.R. § 3.73(b)" is attached.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome
Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 5 of 5)



rescl.c

```
/* 03/06/03 by slava Barsuk */
/* power reset client code */
/* v1.0.0.0 */
```

```
#include <stdio.h>
#include <unistd.h>
#include <sys/ioctl.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <netdb.h>
#include <string.h>
#include <strings.h>
```

```
void main(int argc, char *argv[])
{
    int sock, rc, NB, len;
    struct sockaddr_in server;
    struct hostent *hp, *gethostbyname();
    struct servent *port;
    char hostname[50];
    char buf[1024];
    char wbuf[256];
    int rbuf[2]={4,12};

    if(getuid()!=0) exit();
    if(argc<2)
    { fprintf(stderr,"--- Usage:\n\t%s <hostname> [-r|-h]\n",argv[0]);
      exit(4); }

    len=1024;
    strcpy(hostname,argv[1]);
    port=getservbyname("pwrport",0);

    sock=socket(AF_INET,SOCK_STREAM,0);
    server.sin_family=AF_INET;
    server.sin_len=sizeof(server);
    hp=gethostbyname(hostname);
    bcopy(hp->h_addr,&server.sin_addr,hp->h_length);
    server.sin_port=htons(port->s_port);
    rc=connect(sock,(struct sockaddr *)&server,sizeof(server));
    if(rc!=0) {fprintf(stderr,"--- can't establish connect\n"); exit(4);}
    if(strcmp(argv[2],"-r")==0)
    {
        fprintf(stderr,"attempt to reboot\n");
        rbuf[1]=12;
        write(sock, rbuf,8);
    }
    else if(strcmp(argv[2],"-h")==0)
    {
        fprintf(stderr,"attempt to halt\n");
        rbuf[1]=13;
        write(sock, rbuf,8);
    }
    close(sock);
}
```

dir_list.txt

total 360

| | | | | | | | | |
|------------|---|------|--------|-------|-----|----|------|-----------|
| -rw-r----- | 1 | root | sys | 1274 | Feb | 13 | 2003 | pwrst.c |
| -rw-r--r-- | 1 | root | sys | 1357 | Feb | 13 | 2003 | pwrhd.c |
| -rw-r--r-- | 1 | root | sys | 3734 | Feb | 13 | 2003 | pwrhd |
| -rw-r----- | 1 | root | sys | 1436 | Feb | 13 | 2003 | pwrn.c |
| -rwxr-xr-x | 1 | root | sys | 6083 | Feb | 13 | 2003 | pwrn |
| -rwxr-xr-x | 1 | root | sys | 5883 | Feb | 13 | 2003 | pwrst |
| -rwx----- | 1 | root | system | 288 | Feb | 13 | 2003 | pwr_up |
| -rw-r----- | 1 | root | sys | 1620 | Feb | 13 | 2003 | pstatus.c |
| -rwxr-xr-x | 1 | root | sys | 6179 | Feb | 13 | 2003 | pstatus |
| -rwx----- | 1 | root | system | 274 | Feb | 13 | 2003 | pwrstatus |
| -rwx----- | 1 | root | system | 972 | Mar | 03 | 2003 | pwrreset |
| -rw-r----- | 1 | root | sys | 1290 | Mar | 06 | 2003 | rescl.c |
| -rwx----- | 1 | root | system | 3983 | Mar | 06 | 2003 | rescl |
| -rw-r--r-- | 1 | root | sys | 1738 | Mar | 31 | 2003 | res.c |
| -rwx----- | 1 | root | system | 4305 | Mar | 31 | 2003 | res |
| -rw-r--r-- | 1 | root | sys | 61440 | Oct | 14 | 2003 | pwr.tar |
| -rwxr-xr-x | 1 | root | system | 7910 | Oct | 06 | 2005 | resclx |
| -rw-r--r-- | 1 | root | system | 1857 | Oct | 06 | 2005 | resx.c |
| -rwxr-xr-x | 1 | root | system | 11134 | Oct | 06 | 2005 | resx |
| -rw-r----- | 1 | root | system | 1433 | Oct | 28 | 2005 | resclx.c |
| -rwxr-xr-x | 1 | root | system | 6536 | Oct | 28 | 2005 | rr |
| -rw-r--r-- | 1 | root | system | 8000 | Oct | 28 | 2005 | wc |

**Disclosure END8-2003-0065**

Prepared for and/or by an IBM Attorney - IBM Confidential

Created By Vyacheslav Barsuk On 05/07/2003 01:43:12 PM MDT

Last Modified By Enterprise Agentmgr On 10/09/2004 10:34:22 PM EDT

Archived on 10/09/2004

Required fields are marked with the asterisk (*) and must be filled in to complete the form .

***Title of disclosure (in English)**

Remote power reset of AIX (UNIX) servers through network connection

Summary

| | |
|----------------------------------|---|
| Status | Final Decision (File) |
| Final deadline | |
| Final deadline reason | |
| Docket family | END9-2003-0054 |
| Original location | BLD |
| * Processing location | Endicott |
| * Functional area | (Larry Longseth) Global Services-Boulder |
| Attorney/Patent professional | Arthur Samodovitz/Endicott/IBM |
| Invention development team (IDT) | Gerri Peper/Boulder/IBM Patrick Wong/San Jose/IBM Donald Schaefer/Boulder/IBM |
| Submitted date | 05/07/2003 04:27:37 PM MDT |
| * Owning division | GS |
| * Line of business | INT - IBM Internal Support Primary Inventor's Line of Business (LoB) |
| Incentive program | |
| Lab | LONGSETH |
| * Technology code | 674 |
| Patent value tool (PVT) score | 57 |

Inventors with a Blue Pages entry

Inventors: Vyacheslav Barsuk/Boulder/IBM

| Inventor Name | Inventor Serial | Div/Dept | Inventor Phone | Manager Name |
|----------------------|-----------------|----------|----------------|-------------------------|
| > Barsuk, Vyacheslav | 8A6689 | 07/U8BJ | 347-2303 | Kleespies, Thomas (Tom) |

> denotes primary contact

Inventors without a Blue Pages entry**Invention Development Team Information**

Attorney/Patent professional Arthur Samodovitz/Endicott/IBM

Invention development team (IDT) Gerri Peper/Boulder/IBM
Patrick Wong/San Jose/IBM
Donald Schaefer/Boulder/IBM

Response due to IP&L 06/09/2003

Main Idea



Main Idea for Disclosure END8-2003-0065

Prepared for and/or by an IBM Attorney - IBM Confidential

Archived On 06/11/2003 01:30:27 AM

Title of disclosure (in English)

Remote power reset of AIX (UNIX) servers through network connection

Main Idea

1. Background: What is the problem solved by your invention? Describe known solutions to this problem (if any). What are the drawbacks of such known solutions, or why is an additional solution required? Cite any relevant technical documents or references.

It is applicable to UNIX servers. When server runs out of virtual memory because of application memory consumption, server hangs. It is impossible to login into affected server. Only way to bring server back is to reboot via resetting power. It becomes a huge problem in case of remotely located servers. To reset power remotely, additional hardware required or server should have built in hardware features - like certain models of IBM pseries servers. In both cases installation of additional communication equipment required.

2. Summary of Invention: Briefly describe the core idea of your invention (saving the details for questions #3 below). Describe the advantage(s) of using your invention instead of the known solutions described above.

There is a way to perform remote power reset of hanged server through existing tcp/ip network connection. It doesn't require any additional hardware and compatible with wide range of unix servers . Power reset performs via software.

3. Description: Describe how your invention works, and how it could be implemented, using text, diagrams and flow charts as appropriate.

When server hangs as result of running out of virtual memory, operating system can't launch any new processes, but it is not completely dead.

Server responds to tcp/ip ping. Existing processes, which don't require new system resources will work. If there is a process, with very small memory requirements and pinned to memory, it survives. This process should listen to specific tcp/ip port.

When server hangs, it is possible to send specific tcp packet to hanged server from another server connected to the same network.

Described above process will receive this packet and performs system call in order to reboot or power off server.

Solution was tested on different models of IBM RS/6000 pseries servers running AIX V4.3/5.1 and proved it functionality.

There is a reason to believe that solution will work with other unix servers like linux

To view the Main Idea of this disclosure, open the "Main Idea" document from the view

***Inventor Questions**

- * 1. Select the single most appropriate technology category for your invention from the following technologies list.

(674) Tech Tag 600 Software/Services/ Applications/Solutions-674 Other Software Access
Comments

Are there any additional significant markets where the invention is likely to have impact?

☐ Yes ☒ No

if yes, please identify them:

-
- * 2. Have you implemented the invention (e.g., made a prototype) or otherwise shown that it is workable?

☒ Yes ☐ No

if Yes, then what date

-
- * 3. Has the subject matter of the invention or a product incorporating the invention been offered for sale, or is it likely to be offered for sale, as part of an IBM product or service?

☒ No known product plans within 2 years

☐ Maybe; GA 1-2 years away

☐ Yes; GA within 3-12 months

☐ Yes; GA within 3 months

☐ Yes; product has been announced

-
- * 4. Has the invention been commercially used (internally or externally) by IBM or another entity (for example, included in or used to make products, or prototypes provided to a customer)?

☒ Yes ☐ No

if Yes, please tell us the prototype/product, and when the use first started or is scheduled to start:

Prototype/Product

There are two programs - server part, which listens to request and performs power reset and client part - which sends request to reset power..

Date: March, 2003

-
- * 5. In what type of product might a competitor include the invention?

unix type operating systems

- * What competitor(s) (indicate home country of such competitors if not United States)?

N/A

-
- * 6. How easily can the use of the invention by a third party be detected?

☒ Undiscoverable; third party must admit use for IBM to know

☐ Difficult; e.g.; with reverse engineering or examination of available code

☐ With work; e.g.; using test cases; but not reverse engineering

☐ Easily; by running & viewing product operation

☐ Trivially; without purchase of product; e.g.; by reading product literature

-
- * 7. Is the invention applicable to an Information Technology standard such as those likely to be developed by organizations such as the IETF, W3C, Oasis, ISO, IED or ITU?

☐ Yes ☒ No

if Yes, what organization (if you know) and which standard?

and Is IBM participating in the development or usage of the standard? ☐ Yes ☐ No

To review the Information Technology standards IBM is participating in, go to

<http://w3.ibm.com/standards> 

-
- * 8. Have you, or any of the other inventors, submitted this same invention disclosure or a similar invention disclosure previously?

☐ Yes ☒ No

if Yes, please provide the disclosure number:

* 9. Please list the invention disclosures (previously submitted or about to be submitted), products, patents, or publications that you and the other inventors feel are the most relevant to your invention (for example, pertaining to the problem you are solving, including other solutions to the problem), be they from you or anyone else, or if not applicable, enter "None":

None

* 10. Was the invention made in the course of any activity that involved any other party, be it

• The government ☐ Yes ☐ No

This invention disclosure has been verified to be covered by a government contract. If you feel changes are required to this information, contact the IP location handling this invention disclosure.

If you check "Yes" for this question, you will be prompted to provide the following information

- contract number
- which country's government is issuing the contract
- division holding the contract
- government agency issuing the prime contract
- government program (if known)

• A customer (such as RFQ, IGS engagement)

☐ Yes ☐ No

if yes, describe the activity

• A non-IBM development partner (such as joint development activities)

☐ Yes ☐ No

if yes, describe the activity

• As part of a standards setting activity

☐ Yes ☐ No

if yes, describe the activity

• Other persons not employed by IBM

☐ Yes ☐ No

if yes, describe the activity

If Yes is answered to any of the above, please provide information sufficient to identify the activity (e.g., government contract number, company name, project name, alliance name, name of other party, client services principal, technical coordinator, etc.)

* 11. Have you ever disclosed your invention to anyone outside IBM, or do you plan to do so in the future?

☐ Yes ☒ No

if Yes, please tell us whether the disclosure was (or will be) made, how made (or to be made), and whether or not there was (or is) a confidential disclosure agreement (CDA) in place covering the disclosure:

* 12. Is your invention one which can be offered either directly as a service by IBM or our competitors or which could improve a service offering offered by IBM or our competitors?

☐ Yes ☐ No

If Yes, please explain your answer:

* 13. If the invention relates to a product or service that is outside the scope of your business unit, please

recommend IBM business unit(s), IBM location(s) or individual(s) within IBM that you think would provide a competent evaluation of your invention:

Final Evaluation Questions

A. Threshold Questions

1. Operability - Is implementation of the invention possible?

Yes

Reasons for above answer:

2. Novelty- Are one or more concept(s) of the invention novel over what is already known in the literature, existing commercial products, patents, and earlier IBM invention disclosures?

Yes

Reasons for above answer:

B. Valuation Questions

1. Adequacy of description:

Clear and complete as is

Reasons for answer:

2. Technical contribution of invention:

Minor addition to known technology

Reasons for above answer:

3. Describe the problem solved/benefit provided and the implementation cost of the invention compared to existing or reasonably expected alternatives:

Significant problem/substantial benefit - minor implementation cost

4. Are any alternatives to the invention available to those wishing to avoid its use?

Alternatives have drawbacks

5. Describe the likelihood of use of the invention (answer each):

IBM's customers? Probable

IBM's suppliers/vendors? Probable

IBM's competitors? Probable

IBM? Probable

Reasons for above answer:

6. What % of third party products in the technical field will likely contain the invention?

< 25%

7. How long is the invention likely to be used in products by IBM or others?

5-10 years

8. How easily can use of the invention by a third party be detected?

Trivially; without purchase of product; e.g.; by reading product literature

Reasons for the above answer, including description of how use could be detected:

Evaluation

This team evaluation was entered by Georgia Brundage/Endicott/IBM on 05/29/2003

What is the team's evaluation of this disclosure? Search

Date evaluated : 05/29/2003

Evaluation comments

| | | |
|--------------------------|-------------------------------|-----------------------|
| Final Evaluation History | Who made the final evaluation | Final evaluation date |
| Search | Georgia Brundege/Endicott/IBM | 5/29/2003 |

Search Information

| | | |
|--|-------------------------------------|---|
| Date sent: 05/30/2003 | *Target completion date: 06/16/2003 | Search results received date: 06/18/2003 |
| Who was the search sent to (This area is to designate a Local Searcher name or WAIPL): WAIPL | | |
| *Search type: <input checked="" type="checkbox"/> Patentability <input type="checkbox"/> Clearance <input type="checkbox"/> Validity <input type="checkbox"/> State of Art | | |
| *Features to be searched: PLEASE SEND 2 COPIES OF SEARCH REPORT AND REFERENCES | | |

Occasionally a server runs out of virtual memory and hangs. According to the prior art, the server can be rebooted manually, but this is time consuming. According to the present invention, there is a small program that continually runs (and has little memory requirements) and listens for a TCP/IP ping. When the server hangs, an operator at another, remote server sends the TCP/IP ping (including a data packet). The small program responds to the ping and data packet by automatically making a system call to reboot or power off the server.

Please see the Invention Disclosure for further details.

Search Office Information

| | | |
|---------------------------------------|--|------------------------------|
| Target completion date: 06/16/2003 | <input type="checkbox"/> Search has been delayed | Ship/Return date: 06/17/2003 |
| Search conducted by Bruniger | | |
| Comments | | |

Final Decision

This decision was entered by Georgia Brundege/Endicott/IBM on 07/14/2003

| | |
|---|-------------|
| Decision: File | Status: N/A |
| PPM area: 600 - Software/Services/Applications/Solutions | |
| Date of final decision : 07/08/2003 | |

Additional filing information

Planned Filing date:

Filing comments:

Additional decision comments**Final Decision History**

Entered on 14-Jul-2003 by Georgia Brundege
File N/A 8-Jul-2003 Docket Family: END920030054

Post Disclosure Text & Drawings

To add additional information related to this disclosure once it has been submitted, click the action button below and a new document will be opened for you to enter the new information. To view existing post disclosure information, double-click on the item in the list below (if there has been additional information entered), and the document will open for you to view.

| Date entered | Post disclosure comments and drawings (double-click an item below to view) |
|--------------|--|
|--------------|--|

Form Revised (05/28/03)



res.c

```
/* 03/05/03 */
/* by Slava Barsuk */
/* on demand power reset */

#include <stdio.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <sys/time.h>
#include <sys/select.h>
#include <sys/reboot.h>
#include <sys/sched.h>
#include <sys/lock.h>
#include <netinet/in.h>
#include <netdb.h>
#include <spc.h>
#include <strings.h>
#include <string.h>
#include <signal.h>

char    cws_name[32];
struct  sockaddr_in  server;
int     sock,ws;

int     main_processing()
{
static  struct  sockaddr_in  *pfrom;
static  struct  sockaddr     from;
static  struct  hostent      *hp;
static  struct
{
int     len;
int     code;
char    text[24];
} buf;

static  int     addrlen,NB;

addrlen=sizeof(from);
pfrom=(struct sockaddr_in *)&from;
NB=read(ws,&buf,sizeof(buf));
if(NB!=8 || buf.len!=4 ) return(-1);

if(getpeername(ws,&from,&addrlen)>=0)
{
hp=gethostbyaddr(&pfrom->sin_addr,4,AF_INET);
if(hp==NULL) return(-1);
if(strcmp(hp->h_name,cws_name)!=0) return(-1);
if( buf.code==12 )
{
reboot(RB_SOFTIPL);
}
else if( buf.code==13 )
{
reboot(RB_HALT);
}
}
}

void    main(int argc,char *argv[])
{
```

```

                                res.c
struct servent *port,*getservbyname();
int 1;

strncpy(cws_name,argv[1],30);
if(strlen(cws_name)<2) exit(6);
port=getservbyname("pwrport",0); if(port==0) exit(4);

sock=socket(AF_INET, SOCK_STREAM,0);
if (sock<0) exit(5);

server.sin_family=AF_INET;
server.sin_len=sizeof(server);
server.sin_addr.s_addr=INADDR_ANY;
server.sin_port=htons(port->s_port);
l=sizeof(server);
if (bind(sock,(struct sockaddr *)&server, l))
    exit(7);

if (getsockname(sock, (struct sockaddr *)&server, &l))
    exit(7);
plock(TXTLOCK);

listen(sock,10);

do {
    ws=accept(sock,0,0);
    main_processing();
    close(ws);
}
while(1);

}

```